

Patent Claims

1. Polyethylene moulding compound having a multimodal molecular weight distribution which has an overall density of $\geq 0.940 \text{ g/cm}^3$ and an $\text{MFI}_{190/5}$ in the range from 0.01 to 10 dg/min, characterized in that it comprises an amount of from 30 to 60% by weight of low-molecular-weight ethylene homopolymer A which has a viscosity number VN_A in the range from 40 to 150 cm^3/g , an amount of from 30 to 65% by weight of high-molecular-weight copolymer B comprising ethylene and a further olefin having from 4 to 10 carbon atoms which has a viscosity number VN_B in the range from 150 to 800 cm^3/g , and an amount of from 1 to 30% by weight of ultrahigh-molecular-weight ethylene homopolymer or copolymer C which has a viscosity number VN_C in the range from 900 to 3000 cm^3/g .
- 15 2. Polyethylene moulding compound according to Claim 1, characterized in that it has excellent convertibility into hollow articles, expressed by a swelling rate in the range from 100 to 300%.
- 20 3. Method for the production of a polyethylene moulding compound according to Claim 1, in which the polymerization of the monomers is carried out in suspension at temperatures in the range from 20 to 120°C, a pressure in the range from 2 to 60 bar and in the presence of a highly active Ziegler catalyst composed of a transition-metal compound and an organoaluminium compound, 25 characterized in that the polymerization is carried out in three steps, with the molecular weight of the polyethylene produced in each step in each case being regulated with the aid of hydrogen.
- 30 4. Use of a polyethylene moulding compound according to Claim 1 for the production of hollow articles, such as fuel tanks, canisters, drums or bottles, where the

polyethylene moulding compound is firstly plasticated in an extruder at temperatures in the range from 200 to 250°C and then extruded through a die into a blow mould and cooled therein.